No fee, petition, or certification is required. The Commissioner is authorized to charge any fee due, or credit any overcharge, as a result of this Amendment to Deposit Account No. 03-1935.

IN THE CLAIMS

Kindly amend the claims as follows.

09/996,434 - 2 - EL/2-22088/A/DIV

1-2. (cancelled).

3. (currently amended): A process for mass colouration of a polymer, which comprises adding at least one compound of the formula (I)

$$A(B)_x$$
 (I)

where x is an integer from 1 to 8,

A is the radical of a chromophore of the quinacridone, anthraquinone, perylene, indigo, quinophthalone, indanthrone, isoindolinone, isoindoline, dioxazine, azo, phthalocyanine or diketopyrrolopyrrole series, this radical being linked with x B groups via one or more heteroatoms, these heteroatoms being selected from the group consisting of N, O and S and forming part of the radical A, and

B is hydrogen or a group of the formula

althoughwherein at least one B group is not hydrogen and when x is from 2 to 8 the B groups may be identical or different,

is oxygen or is selected from the group consisting of methylene, methyleneoxy and ethylene, each member of the group being unsubstituted or substituted by one R_5 or by 2 radicals, R_5 and R_6 , or is two separate radicals, R_7 and R_8 , R_7 being attached to the same atom as R_1 and R_8 to the same atom as R_4 ,

 E_2 is selected from the group consisting of methylene, ethylene, propylene and butylene, each member of the group being unsubstituted or substituted by one R_9 or by 2 radicals, R_9 and R_{10} , or is two separate radicals, R_{11} and R_{12} , R_{11} being attached to the same atom as R_1 and R_{12} to the same atom as R_4 ,

 G_1 is O or $N(R_{13})$,

R₁ is hydrogen, methyl, ethyl, methoxy or ethoxy,

 R_2 and R_3 are independently hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, C_1 - C_8 alkoxy- C_2 - C_8 alkylene or C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy,

R₄ is hydrogen, C₁-C₈alkyl, C₁-C₈alkoxy, C₁-C₈alkoxy-C₂-C₈alkylene, C₁-C₈alkoxy-C₂-C₈alkyleneoxy, C₅-C₆cycloalkyl, C₅-C₆cycloalkoxy, phenyl, phenoxy or a 5- or 6-membered, saturated or singly to triply unsaturated heterocyclic radical,

09/996,434 - 3 - EL/2-22088/A/DIV

R₅, R₆, R₉, R₁₀ and R₁₂ are independently C₁-C₈alkyl or C₁-C₈alkoxy,

or R₆ and R₉ together are a direct bond,

 R_7 and R_8 are independently hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, C_1 - C_8 alkoxy- C_2 - C_8 alkylene or C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy,

R₁₁ is hydrogen, C₁-C₈alkyl or C₁-C₈alkoxy,

R₁₃ is methyl or ethyl, and

R₁₄ is C₁-C₈alkyl, C₅-C₆cycloalkyl, phenyl or a 5- or 6-membered, saturated or singly to triply unsaturated heterocyclic radical,

it being possible for two methoxies attached to the same carbon atom to combine and form 1,2-ethylenedioxy, or for methoxy to combine with ethoxy attached to the same carbon atom to form 1,2- or 1,3-propylenedioxy, or for methoxy or ethoxy to combine with ethoxy attached to α - or β -enchained carbon to form dimethylmethylene.

and where additionally

- a) R_1 , R_2 , R_3 , R_7 or R_{11} is hydrogen, and
- b) when E_1 is two separate radicals R_7 and R_8 and E_2 is methylene or ethylene at least one of the following further conditions applies:

 R_1 , R_2 , R_3 , R_4 , R_7 , R_8 , R_9 or R_{10} is methoxy or ethoxy;

 R_2 , R_3 , R_4 , R_7 , R_8 , R_9 or R_{10} is secondary C_3 - C_8 alkyl or tertiary C_4 - C_8 alkyl or C_3 - C_8 alkoxy;

 $R_2,\ R_3,\ R_7\ or\ R_8\ is\ C_1\text{--}C_8 alkoxy-C_2\text{--}C_8 alkylene\ or\ C_1\text{--}C_8 alkoxy-C_2\text{--}C_8 alkylene oxy;}$

Of

 R_4 is C_5 - C_6 cycloalkyl, C_5 - C_6 cycloalkoxy, phenyl, phenoxy or a 5- or 6-membered heterocyclic radical to the polymer before or during processing, the processing taking the form of extrusion, injection moulding or fibre spinning at 220 to 330°C.

- 4. (currently amended): an engineering plastic having a glass transition point (T_g) of 220 to 330°C, preferablywherein the plastic is polyolefin, polyester, polyamide or a polyimide, polysulfone, polyether sulfone, polyphenylene oxide, polyarylene, polyarylene sulfide, polyepoxide, polyphenylene oxide or ABS, pigmented according to claim 3.
- 5. (original): An engineering plastic according to claim 4 in the form of a fibre.
- 6. (currently amended): A process for pigmenting a porous material, which comprises at least one compound of the formula (I)

 $A(B)_x$

(l)

where x is an integer from 1 to 8,

A is the radical of a chromophore of the quinacridone, anthraquinone, perylene, indigo, quinophthalone, indanthrone, isoindoline, isoindoline, dioxazine, azo, phthalocyanine or diketopyrrolopyrrole series, this radical being linked with x B groups via one or more heteroatoms, these heteroatoms being selected from the group consisting of N, O and S and forming part of the radical A, and

B is hydrogen or a group of the formula

although wherein at least one B group is not hydrogen and when x is from 2 to 8 the B groups may be identical or different,

is oxygen or is selected from the group consisting of methylene, methyleneoxy and ethylene, each member of the group being unsubstituted or substituted by one R_5 or by 2 radicals, R_5 and R_6 , or is two separate radicals, R_7 and R_8 , R_7 being attached to the same atom as R_1 and R_8 to the same atom as R_4 ,

 E_2 is selected from the group consisting of methylene, ethylene, propylene and butylene, each member of the group being unsubstituted or substituted by one R_9 or by 2 radicals, R_9 and R_{10} , or is two separate radicals, R_{11} and R_{12} , R_{11} being attached to the same atom as R_1 and R_{12} to the same atom as R_4 ,

 G_1 is O or $N(R_{13})$.

R₁ is hydrogen, methyl, ethyl, methoxy or ethoxy.

 R_2 and R_3 are independently hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, C_1 - C_8 alkoxy- C_2 - C_8 alkylene or C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy,

 R_4 is hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, C_1 - C_8 alkoxy- C_2 - C_8 alkylene, C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy, C_5 - C_6 cycloalkyl, C_5 - C_6 cycloalkoxy, phenyl, phenoxy or a 5- or 6-membered, saturated or singly to triply unsaturated heterocyclic radical.

R₅, R₆, R₉, R₁₀ and R₁₂ are independently C₁-C₈alkyl or C₁-C₈alkoxy,

or R₆ and R₉ together are a direct bond,

 R_7 and R_8 are independently hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, C_1 - C_8 alkoxy- C_2 - C_8 alkylene or C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy,

R₁₁ is hydrogen, C₁-C₈alkyl or C₁-C₈alkoxy,

R₁₃ is methyl or ethyl, and

R₁₄ is C₁-C₈alkyl, C₅-C₆cycloalkyl, phenyl or a 5- or 6-membered, saturated or singly to triply unsaturated heterocyclic radical,

it being possible for two methoxies attached to the same carbon atom to combine and form

1,2-ethylenedioxy, or for methoxy to combine with ethoxy attached to the same carbon atom to form

1,2- or 1,3-propylenedioxy, or for methoxy or ethoxy to combine with ethoxy attached to α - or β -enchained carbon to form dimethylmethylene,

and where additionally

- a) R_1 , R_2 , R_3 , R_7 or R_{11} is hydrogen, and
- b) when E_1 is two separate radicals R_7 and R_8 and E_2 is methylene or ethylene at least one of the following further conditions applies:

 R_1 , R_2 , R_3 , R_4 , R_7 , R_8 , R_9 or R_{10} is methoxy or ethoxy;

R₂, R₃, R₄, R₇, R₈, R₉ or R₁₀ is secondary C₃-C₈alkyl or tertiary C₄-C₈alkyl or C₃-C₈alkoxy;

 R_2 , R_3 , R_7 or R_8 is C_1 - C_8 alkoxy- C_2 - C_8 alkylene or C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy;

or

 R_4 is C_5 - C_6 cycloalkyl, C_5 - C_6 cycloalkoxy, phenyl, phenoxy or a 5- or 6-membered heterocyclic radical, in liquid form or dissolved in an inert liquid in a weight concentration of at least 25%, penetrating into the pores of the porous material and thereafter being thermally converted into a pigment of the formula

 $A(H)_x$ (VI)

wherein A and x have the same meaning as in formula (I).

- 7. (original): Material pigmented according to claim 6, selected from anodized aluminium and sintered boridic material.
- 8. (currently amended): High molecular weight organic material having a glass transition point (T_g) of 140°C to 220°C and containing in its bulk 0.1 to 10% by weight of a compound of the formula (I) A(B)_x (I)

where x is an integer from 1 to 8,

A is the radical of a chromophore of the quinacridone, anthraquinone, perylene, indigo, quinophthalone, indanthrone, isoindolinone, isoindoline, dioxazine, azo, phthalocyanine or diketopyrrolopyrrole series, this radical being linked with x B groups via one or more heteroatoms,

these heteroatoms being selected from the group consisting of N, O and S and forming part of the radical A, and

B is hydrogen or a group of the formula

althoughwherein at least one B group is not hydrogen and when x is from 2 to 8 the B groups may be identical or different,

 E_1 is oxygen or is selected from the group consisting of methylene, methyleneoxy and ethylene, each member of the group being unsubstituted or substituted by one R_5 or by 2 radicals, R_5 and R_6 , or is two separate radicals, R_7 and R_8 , R_7 being attached to the same atom as R_1 and R_8 to the same atom as R_4 ,

 E_2 is selected from the group consisting of methylene, ethylene, propylene and butylene, each member of the group being unsubstituted or substituted by one R_9 or by 2 radicals, R_9 and R_{10} , or is two separate radicals, R_{11} and R_{12} , R_{11} being attached to the same atom as R_1 and R_{12} to the same atom as R_4 ,

 G_1 is O or $N(R_{13})$,

R₁ is hydrogen, methyl, ethyl, methoxy or ethoxy,

 R_2 and R_3 are independently hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, C_1 - C_8 alkoxy- C_2 - C_8 alkylene or C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy,

 R_4 is hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, C_1 - C_8 alkoxy- C_2 - C_8 alkylene, C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy, C_5 - C_6 cycloalkyl, C_5 - C_6 cycloalkoxy, phenyl, phenoxy or a 5- or 6-membered, saturated or singly to triply unsaturated heterocyclic radical,

R₅, R₆, R₉, R₁₀ and R₁₂ are independently C₁-C₈alkyl or C₁-C₈alkoxy,

or R₆ and R₉ together are a direct bond,

 R_7 and R_8 are independently hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, C_1 - C_8 alkoxy- C_2 - C_8 alkylene or C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy,

 R_{11} is hydrogen, C_1 - C_8 alkyl or C_1 - C_8 alkoxy,

R₁₃ is methyl or ethyl, and

R₁₄ is C₁-C₈alkyl, C₅-C₆cycloalkyl, phenyl or a 5- or 6-membered, saturated or singly to triply unsaturated heterocyclic radical,

09/996,434 - 7 - EL/2-22088/A/DIV

it being possible for two methoxies attached to the same carbon atom to combine and form 1,2-ethylenedioxy, or for methoxy to combine with ethoxy attached to the same carbon atom to form 1,2- or 1,3-propylenedioxy, or for methoxy or ethoxy to combine with ethoxy attached to α - or β -enchained carbon to form dimethylmethylene, and where additionally

- a) R_1 , R_2 , R_3 , R_7 or R_{11} is hydrogen, and
- b) when E_1 is two separate radicals R_7 and R_8 and E_2 is methylene or ethylene at least one of the following further conditions applies:

 R_1 , R_2 , R_3 , R_4 , R_7 , R_8 , R_9 or R_{10} is methoxy or ethoxy;

R₂, R₃, R₄, R₇, R₈, R₉ or R₁₀ is secondary C₃-C₈alkyl or tertiary C₄-C₈alkyl or C₃-C₈alkoxy;

 R_2 , R_3 , R_7 or R_8 is C_1 - C_8 alkoxy- C_2 - C_8 alkylene or C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy;

or

 R_4 is C_5 - C_6 cycloalkyl, C_5 - C_6 cycloalkoxy, phenyl, phenoxy or a 5- or 6-membered heterocyclic radical, based on the total weight.

9. (currently amended): A thermochromic material comprising a polymer coloured in the mass by a product obtainable by partial thermal decomposition of a compound of the formula (I)

$$A(B)_{x} (I)$$

where x is an integer from 1 to 8,

A is the radical of a chromophore of the quinacridone, anthraquinone, perylene, indigo, quinophthalone, indanthrone, isoindolinone, isoindoline, dioxazine, azo, phthalocyanine or diketopyrrolopyrrole series, this radical being linked with x B groups via one or more heteroatoms, these heteroatoms being selected from the group consisting of N, O and S and forming part of the radical A, and

B is hydrogen or a group of the formula

althoughwherein at least one B group is not hydrogen and when x is from 2 to 8 the B groups may be identical or different,

E₁ is oxygen or is selected from the group consisting of methylene, methyleneoxy and ethylene, each member of the group being unsubstituted or substituted by one R₅ or by 2 radicals, R₅ and R₆, or

is two separate radicals, R_7 and R_8 , R_7 being attached to the same atom as R_1 and R_8 to the same atom as R_4 ,

 E_2 is selected from the group consisting of methylene, ethylene, propylene and butylene, each member of the group being unsubstituted or substituted by one R_9 or by 2 radicals, R_9 and R_{10} , or is two separate radicals, R_{11} and R_{12} , R_{11} being attached to the same atom as R_1 and R_{12} to the same atom as R_4 ,

 G_1 is O or $N(R_{13})$,

R₁ is hydrogen, methyl, ethyl, methoxy or ethoxy,

 R_2 and R_3 are independently hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, C_1 - C_8 alkoxy- C_2 - C_8 alkylene or C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy,

 R_4 is hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, C_1 - C_8 alkoxy- C_2 - C_8 alkylene, C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy, C_5 - C_6 cycloalkyl, C_5 - C_6 cycloalkoxy, phenyl, phenoxy or a 5- or 6-membered, saturated or singly to triply unsaturated heterocyclic radical,

 R_5 , R_6 , R_9 , R_{10} and R_{12} are independently C_1 - C_8 alkyl or C_1 - C_8 alkoxy,

or R₆ and R₉ together are a direct bond,

 R_7 and R_8 are independently hydrogen, C_1 - C_8 alkyl, C_1 - C_8 alkoxy, C_1 - C_8 alkoxy- C_2 - C_8 alkylene or C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy,

R₁₁ is hydrogen, C₁-C₈alkyl or C₁-C₈alkoxy,

R₁₃ is methyl or ethyl, and

 R_{14} is C_1 - C_8 alkyl, C_5 - C_6 cycloalkyl, phenyl or a 5- or 6-membered, saturated or singly to triply unsaturated heterocyclic radical,

it being possible for two methoxies attached to the same carbon atom to combine and form

1,2-ethylenedioxy, or for methoxy to combine with ethoxy attached to the same carbon atom to form

1,2- or 1,3-propylenedioxy, or for methoxy or ethoxy to combine with ethoxy attached to α - or β -enchained carbon to form dimethylmethylene,

and where additionally

- a) R₁, R₂, R₃, R₇ or R₁₁ is hydrogen, and
- b) when E_1 is two separate radicals R_7 and R_8 and E_2 is methylene or ethylene at least one of the following further conditions applies:

 R_1 , R_2 , R_3 , R_4 , R_7 , R_8 , R_9 or R_{10} is methoxy or ethoxy;

R₂, R₃, R₄, R₇, R₈, R₉ or R₁₀ is secondary C₃-C₈alkyl or tertiary C₄-C₈alkyl or C₃-C₈alkoxy;

 R_2 , R_3 , R_7 or R_8 is C_1 - C_8 alkoxy- C_2 - C_8 alkylene or C_1 - C_8 alkoxy- C_2 - C_8 alkyleneoxy;

or

R₄ is C₅-C₆cycloalkyl, C₅-C₆cycloalkoxy, phenyl, phenoxy or a 5- or 6-membered heterocyclic radical

09/996,434 - 9 - EL/2-22088/A/DIV

or by two compounds, selected from the group consisting of compounds of the formula (I) and pigments of the formula

 $A(H)_x$ (VI)

wherein A and x have the same meaning as in formula I.

10.(currently amended): A thermochromic material according to claim 9, which is comprised within a composite, preferably within a security item.

11-31 (cancelled).

09/996,434 - 10 - EL/2-22088/A/DIV

32. (new): A process according to claim 6 for pigmenting a porous material wherein formula (I) comprises a binary or ternary mixture including 60 to 99.9% by weight of a compound of the formula (I) and 0.1 to 40% by weight of one or two thermally more labile compounds of the same chromophore class with an A' that differs from A.

33. (new): A process according to claim 32 wherein the thermally more labile compound of the same chromophore class with an A' that differs from A is a compound of the formula

$$A' \begin{bmatrix} O \\ - O - R_{17} \end{bmatrix}_{X'}$$
 (VII),

where x' is an integer from 1 to 8 and A' is the radical of a chromophore of the quinacridone, anthraquinone, perylene, indigo, quinophthalone, indanthrone, isoindolinone, isoindoline, dioxazine, azo, phthalocyanine or diketopyrrolopyrrole series, this radical being linked with x'-COOR₁₇ groups via one or more heteroatoms, these heteroatoms being selected from the group consisting of N, O and S and forming part of the radical A' and R₁₇ being a tertiary organic group.

34. (new): A process according to claim 6 for pigmenting a porous material wherein formula (I) is a mixture according to claim 32, which is a binary mixture of 99.5 to 95% by weight of a compound of the formula (I) and 0.5 to 5% by weight of a thermally more labile compound of the same chromophore class with an A' that differs from A.

35. (new): A process according to claim 33 for pigmenting a porous material, wherein said R_{17} radicals are selected from the group consisting of tert-butyl, tert-amyl, 2-methyl-3-buten-2-yl, 2-methyl-3-butyn-2-yl, 4-oxa-2-pentyl and 4,7-dioxa-1-methyl-2-octyl.